

**WHAT IS CLAIMED IS:**

- 1           1. A storm water pretreatment system comprising:
  - 2           a retention area including a floor;
  - 3           a collection vault with an inlet in fluid communication with the retention area and
  - 4           an outlet;
  - 5           an oil/water separator;
  - 6           a dry well;
  - 7           a first pipe putting the collection vault in fluid communication with the oil/water
  - 8           separator;
  - 9           a second pipe putting the oil/water separator in fluid communication with the dry
  - 10          well; and
  - 11          a valve on the second pipe;
  - 12          an anti-siphon valve on the second pipe; and
  - 13          a sensing probe, controls and actuator operatively attached to the valve.
- 1           2.       A storm water pretreatment system as claimed in claim 1, further
- 2           comprising a probe float switch operatively connected to the controls
- 1           3        A storm water pretreatment system as claimed in claim 1, further
- 2           comprising a first indicator to indicate when the valve is open.
- 1           4.       A storm water pretreatment system as claimed in claim 1, further
- 2           comprising a second indicator to indicate when the valve is closed.

1           5.       A storm water pretreatment system as claimed in claim 1, further  
2   comprising a third indicator to indicate when contaminants have been detected in storm  
3   water.

1           6.       A storm water pretreatment system as claimed in claim 1, further  
2   comprising an audible alarm to indicate when contaminants have been detected in storm  
3   water.

1           7.       A storm water pretreatment system as claimed in claim 1, wherein the  
2   valve on the second pipe is a butterfly valve.

1           8.       A storm water pretreatment system as claimed in claim 1, wherein the  
2   actuator is electrically powered.

1           9.       A storm water pretreatment system as claimed in claim 1, wherein the  
2   actuator is hydraulically powered.

1           10.      A storm water pretreatment system as claimed in claim 1, wherein the  
2   actuator is pneumatically powered.

1           11.      A storm water pretreatment system as claimed in claim 1, further  
2   comprising a swing check valve located on the first pipe

- 1           12.     A method for pretreating storm water comprising the steps of:
- 2           Gathering storm water in a retention area including a bottom;
- 3           Providing a collection vault with an opening in fluid communication with the
- 4 bottom of the retention area such that the storm water will flow into the collection vault;
- 5           Providing an oil/water separator in fluid communication with the collection vault
- 6 such the storm water will flow into the oil/water separator and separate the storm water
- 7 from the contaminating elements that are lighter than water and the sediment that is
- 8 heavier than water;
- 9           Providing a drywell in fluid communication with the oil/water separator such that
- 10 the storm water flows from the oil/water separator into the drywell;
- 11           Monitoring the storm water for the presence of contaminants using a sensor
- 12 probe;
- 13           Providing a valve located between the oil/water separator and the drywell, the
- 14 valve having an actuator operated by controls; and
- 15           Closing the valve when contaminants are detected in the storm water.
- 1           13. The method as claimed in claim 12 further comprising the step of :
- 2           activating a first indicator when the valve is open
- 1           14. The method as claimed in claim 12 further comprising the step of :
- 2           activating a second indicator when the valve is closed.
- 1           15. The method as claimed in claim 12 further comprising the step of :
- 2           activating a third indicator when contaminates are detected in the storm water.
- 1           16. The method as claimed in claim 12 further comprising the step of :
- 2           activating an audible alarm when contaminates are detected in the storm water.

1           17.     A method for pretreating storm water comprising the steps of:

2           Gathering storm water in a retention area including a bottom;

3           Providing a collection vault with an opening in fluid communication with the

4     bottom of the retention area such that the storm water will flow into the collection vault;

5           Providing an oil/water separator in fluid communication with the collection vault

6     such the storm water will flow into the oil/water separator and separate the storm water

7     from contaminating elements present in the storm water that are lighter than water and

8     sediment present in the storm water that is heavier than water;

9           Providing a drywell in fluid communication with the oil/water separator such that

10    the storm water flows from the oil/water separator into the drywell;

11          Monitoring the retention area for the presence of storm water using a probe float

12    switch;

13          Monitoring the storm water for the presence of contaminants using a sensor

14    probe;

15          Providing a valve located between the oil/water separator and the drywell such

16    that the valve, when closed, can terminate the fluid communication between the oil/water

17    separator and the drywell, and when open, can put the oil/water separator and drywell in

18    fluid communication with each other;

19          Maintaining the valve in a normally closed position;

20          Opening the valve when storm water is detected in the retention area; and

21          Closing the valve when the valve is open and contaminants are detected in the

22    storm water.

1           18. The method as claimed in claim 17 further comprising the step of :

2       activating a first indicator when the valve is open.

1       19. The method as claimed in claim 17 further comprising the step of :

2       activating a second indicator when the valve is closed.

1       20. The method as claimed in claim 17 further comprising the step of :

2       activating a third indicator when   contaminates are detected in the storm water.

1       21. The method as claimed in claim 17 further comprising the step of :

2       activating an audible alarm when   contaminates are detected in the storm water